REMARKS

Reconsideration and allowance are respectfully requested in light of the above amendment and the following remarks.

At the outset, the Applicant wishes to thank the examiner for the courtesy shown to their representative during a personal interview on November 29, 2004. The following comments include a summary of the points discussed during the interview.

Fig. 5 is now labeled as "prior art."

Claims 34-51 stand rejected under 35 USC 103 as obvious over USPN 5844918 to Kato. The Applicants respectfully traverse this rejection based on differences in structure, operations, purposes and results between the claimed invention and Kato's system.

It is well settled that, in order to support an obviousness rejection, there must be some teaching, suggestion or motivation in the prior art or in the knowledge generally available to one of ordinary skill in the art, to combine, substitute or otherwise modify the prior art in a way that would produce the claimed invention. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). Here, there is no such suggestion or motivation, as will be apparent from the following points.

The orders of the operations in the present claimed invention and in Kato are different, and the purposes of the operations are

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different. It would not have been obvious to rearrange the order of the steps in Kato to achieve the present claimed invention, and there is no motivation to make such a modification of Kato's system.

Further, the present claimed invention is directed to solving the problem discussed at application page 1, line 9 through page 3, line 20 and illustrated in Fig. 5. The Applicant's representative noted during the interview how the present invention solves the problem illustrated in Fig. 5. In contrast, Kato deals with a different problem, as discussed at col. 3, lines 5-14, and Kato solves this problem as discussed at col. 3, lines 16-35. Kato shows no recognition of the problem addressed by the present invention, and does not teach a solution to this problem.

More particularly, Kato's system is very different from the present claimed invention as will be apparent from the following.

<u>Kato</u>

In Fig. 5 of Kato, the following steps are performed in order:

error correcting encoding of basic data in Fig. 5a; data segmentation in Fig. 5b; CRC attachment in Fig. 5c; and concatenation in Fig. 5d.

In Fig. 7 of Kato, the following steps are performed in order:

data reception of data transmitted in Fig. 5 in Fig. 7a; error correcting (decoding) in Fig. 7c; and CRC check in step 7d.

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Claimed Invention

Representative claim 34 calls for in order: CRC attachment to respective transport blocks, concatenation of the transport blocks having the CRC bits, segmentation of the concatenated transport block into code blocks, and error correcting encoding of the code blocks

The following table shows the differences between claim 34 and Kato's Fig. 5:

claim 34	Kato
	Fig. 5a- create error correcting code consisting of basic data complete with a parity code
	Fig. 5b- divide the error correcting code into smaller data segments of fixed length
1. CRC attachment to plural transport blocks	Fig. 5c- CRC attachment to the plural data segments
2. concatenation of transport blocks having CRC bits	Fig. 5d- create transmission data packet and transmit on a packet-by-packet basis
3. code block segmentation of concatenated transport block into code blocks, wherein each of the code blocks has one of the CRC bits as a last bit thereof and wherein at least one predetermined bit is added to the beginning of one of the code blocks	no segmentation after Fig. 5d
4. error correcting coding of each of the code blocks	no error correcting coding after Fig. 5d

As is apparent from the above, in the claimed invention, the error correcting coding is done after the code block segmentation, and the code block segmentation is done after the CRC attachment. In contrast, in Kato, the error correcting encoding is done in Fig. 5a prior to segmentation in Fig. 5b, and there is no segmentation done after CRC attachment.

The purpose of the present invention includes segmenting the concatenated code block into code blocks wherein each of the code blocks has one of the CRC bits as a last bit thereof, in order to increase the decoding quality at the corresponding receiving unit. In other words, for decoding (especially turbo decoding), the end of the decoded data should contain CRC bits. Thus, the present invention recognizes the advantage, at the transmitting unit, of disposing the code block segmentation unit between the CRC attachment unit and the error correcting coding unit in order to achieve the objective that the end of the code blocks should contain CRC bits.

In contrast, the purpose of Kato (see col. 3, lines 16-35) is to enable a hybrid FEC/ARQ system to operate properly (1) without execution of FEC on a packet-by-packet basis wherein an ECC having a parity code appended thereto from the outset is transmitted and (2) where data to be subjected to FEC and a data packet are different in length.

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From the above, it is apparent that Kato fails to disclose or suggest the features of present claim 34, i.e., a CRC attachment unit that attaches respective CRC-bits to plural transport blocks, a concatenating unit that concatenates the transport blocks having the CRC-bit, a code block segmentation unit that segments the concatenated transport block into code blocks, and an error correcting coding unit that encodes each of the code blocks, wherein the segmentation unit adds at least one predetermined bit to the beginning of one of the code blocks and wherein each of the code blocks has one of the CRC-bits as a last bit thereof. As noted above, the order of the operations performed by claim 34 is highly significant and this order is not disclosed or suggested by Kato.

Independent claim 46 is a method claim that parallels apparatus claim 34 and is allowable for similar reason that claim 34 is allowable.

Each of the other independent claims adds features beyond those noted above of claim 34 and is allowable for at least the reasons given above for the allowance of claim 34. Each of the present dependent claims is allowable by virtue of its dependence from an allowable independent claim, and also due to its recitation of subject matter that provides an independent basis for its individual allowability. For example, claims 35 and 47 state that

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the at least one predetermined bit is added to the beginning of one of the code blocks when a number of bits of the concatenated transport block is not an integer multiple of a number of the code blocks. Claims 36 and 48 state that the at least one predetermined bit is added to the beginning of one of the code blocks so as to make the code blocks the same size. Various dependent claims define the at least one predetermined bit as 0.
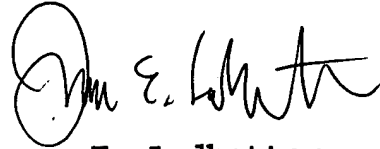
Accordingly, it is submitted that the present claims are allowable over Kato because (1) the orders of the operations in the present claimed invention and in Kato are different, (2) the purposes of the operations are different, (3) it would not have been obvious to rearrange the order of the steps in Kato to achieve the present claimed invention, (4) there is no motivation to make such a modification of Kato's system, (5) the present invention is directed to solving the problem discussed at application page 1, line 9 through page 3, line 20 and illustrated in Fig. 5, whereas Kato deals with a different problem, as discussed at col. 3, lines 5-14, and Kato solves this problem as discussed at col. 3, lines 16-35, and (6) Kato shows no recognition of the problem addressed by the present invention, and does not teach a solution to such problem.

A notice of allowance is respectfully solicited.

If any issues remain that may be best resolved through a telephone communication, the examiner is requested to telephone the

undersigned at the local Washington, D.C. telephone number listed

below.

Respectfully submitted,

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IN THE DRAWINGS

A proposed change to Fig. 5 is submitted herewith.